

EMERGENCY
COMMUNICATIONS
PUBLIC SERVICE
EXPERIMENTATION
INFORMATION
EDUCATION



ARRL affiliated
Club # 2047

Emergency Communications
for:

COUNTY OF
CUYAHOGA



Div. of
Emergency Assistance & Planning

P.O. Box 30529
Cleveland, Ohio 44130

Not for profit Ohio corporation tax-exempt under IRS Section 501(c)(3).

CODE PRACTICE

SUNDAYS 8 PM

145.29

6,9,13,16,20 & 24

W.P.M.

North Coast

Communicator

INFORMAL NETS

SUNDAYS 9 PM

145.29

WEDNESDAYS 7 PM

3.870 +/-10

SEPTEMBER-OCTOBER, 1986

Board Meeting Notice

6:00 PM Thursday September 4 and October 2, 1986 at Denny's Restaurant, 25912 Lorain Road (on the North Side of Lorain between Great Northern Blvd and Brookpark Road).

General Meeting Notice

7:30 PM Thursday September 4 and October 2, 1986 at the North Olmsted branch of the Cuyahoga County Public Library, 27425 Butternut Ridge Road (on the South side next to North Olmsted Middle School between Dover Center and Lorain Roads).

Programs/Notes:

September 4 - NCARC activities at Cleveland Hamfest & Banquet,
- NCARC Operating Budget and future financial needs.
October 2 - Packet Radio Update, presented by Tom Kryza KB8CI
- NCARC Candy Bar Fund Raising Campaign Wrap-up.

NORTH COAST ARC CANDY BAR FUND RAISING CAMPAIGN ALREADY A BIG SUCCESS

An amazing 2,500 Malley candy bars have already been either sold or distributed. Several of our members have really jumped on this effort in a big way.... reports will be given in the next North Coast Communicator on just who is helping out in this campaign which will run until the first part of October. There is plenty of time left for you to get involved if you haven't already done so.

Our club has additional needs for funds to address our expansion of current repeater coverage, ownership issues and other club functions that current membership dues alone cannot meet adequately.

Everyone, who so desires, can help by getting involved with this campaign. If you would like to start, or would like to obtain additional supplies, please contact Rick K8SCI or Pauline KA8FOE at 779-8999. The total success of this campaign is linked directly with the total commitment by all members participating.

WELCOME NEW NORTH COAST A.R.C. MEMBERS

Help give a warm welcome to the following new members since the last issue of the North Coast Communicator: Elizabeth Nagy N8HPV (daughter of Ernie N8ETW and Mary N8ETZ), Dave Jones K8MBZ, Ralph Scott KA8WHK and Joe Walker KA8WJH.

MINUTES OF THE 08/07/86 TRUSTEE MEETING de Steve Wolf, N08M

The meeting was called to order at 1803 hours by the President. In attendance were Bob (K8TTZ), Mike (K9SSL), Tom (KV8M), Rick (K8SCI), Dick (WD8ISB), Tom (N8ETP), Tim (NR8T), Pauline (KA8FOE), Steve (N8GNJ), Steve (N08M) and Glenn (WD80MW). Visitors included Gerri (XYL of N8ETP), Jeff (KROJ), Dave (N8ETY) and Ray (WD8MHL).

On a motion from Tim (NR8T), Ray (WD8MHL) was accepted as a trustee.

Due to problems with attendance at the meetings, Shirley (KA8Y) has resigned as a trustee. On a motion from Mike (K9SSL) her resignation was accepted.

Recommendations from the Finance Committee on the budget were presented by Dave (N8ETY). On a motion made by Mike (K9SSL), the Operating Budget as submitted by the Finance Committee was approved.

A special trustee meeting to discuss the financial issues facing the club was set for August 21, at 1900 hours.

Bob (K8TTZ) was present at the last trustee meeting but the minutes did not show him in attendance. On a motion from Mike (K9SSL) the minutes of the prior trustees meeting were approved as corrected.

The meeting was adjourned at 1914 hours.

MINUTES OF THE 08/07/86 GENERAL MEETING de Steve Wolf, N08M

The meeting was called to order at 1937 hours by the President. There were 7 guests, 35 members and 10 trustees present. On a motion from Steve (N8GNJ) the minutes of the last General Meeting were approved. Glenn (WD80MW) gave the Treasurer's Report.

Dave (N8ETY) reported that the Finance Committee has turned over the Operating Budget to the trustees.

Basil (K8UTE) reported that the Shrine Equipment Sale was rescheduled for September 13. This change was due to the passing of Tom (N8DBL) who directed the group. Tom was also a member of North Coast.

Shirley (KA8Y) has resigned as a trustee due to her difficulty in attending meetings. A trustee position is open. Ray (WD8MHL) was approved as a trustee at the last trustee meeting.

Door prizes were won by Al (WD8JMM) and Jim (KB8ZA). The 50-50 raffle prize (\$17.75) was won by Ken (N8EIJ).

The meeting was adjourned at 2043 hours. The program was given by Rick (K8SCI) on foxhunting.

FOX HUNT Report for Saturday August 9, 1986

The fox hunt commenced at 7:10 PM. The fox (John K8RZP) was hiding on Hunter Road in Avon Lake, Ohio. The order in which the hunters came in were: #1) Jim N8LL & Lew WD8DIE at 48 minutes and 55 seconds using a DoppleScAnt system, #2) Bob K8DTS & his daughter Amy at 49 minutes using a DoppleScAnt system, #3) Steve N08M & Mary KA8ZVV at 53 minutes using a 1/4 wave trunk mounted vertical, #4) Rick K8SCI & Pauline KA8FOE & Joe W8ZSD at 57 minutes using a two-element Yagi, #5) Dave N8ETY & Tom KV8M at 60 minutes using a two-element Quad, #6) Jerry K8YUW at 62 minutes using a DoppleScAnt system, #7) Mike K9SSL and his wife Dee and daughter Cassandra in 66 minutes using a three-element Yagi (boom is constructed from an old broom stick), and two other hunters came close (Jim WD8CHL using a 1/2 wave vertical and Ken N8EIJ).

Since Jim N8LL came in first he will become the fox for the September 13 hunt. All met for food and drink and good conversation at Frankies Pizza on Great Northern Blvd afterwards.

TOM CHANEY N8DBL IS NOW A SILENT-KEY

We are sad to report that Tom has lost his battle with cancer. Tom, 40, of Brecksville was the Director of the Al Koran Shrine Radio Unit, Treasurer of the Cleveland Hamfest Association, and a member of both the Western Reserve Radio Association and the North Coast Amateur Radio Club. Tom will be missed by many and our deepest thoughts go out to his wife, Michele.

AL KORAN SHRINE RADIO UNIT BIG FELLOW event scheduled for AUGUST 2 POSPONED

Due to the passing of Tom N8DBL, the event has been rescheduled for September 13. The Shrine Radio Unit has been donated many items of radio gear that will be available for purchase at the parking lot of the Al Koran Shrine Mosque (NW corner of East 36 and Euclid Avenue). Starts at 8:30 AM and will be open until approximately 3:30 PM.

Proceeds from the event are donated to the Shrine Crippled and Burned Childrens Hospitals.

If you would like to assist the Shrine Radio Unit in this very worthwhile event, please contact Paul Cornell W8EFW at 442-7024 to volunteer your help.

NORTH COAST COMMUNICATOR EVENTS EDITOR NEEDED

Need an individual to maintain and provide an on going 2-3 month calendar database on upcoming events, hamfest, and public services for printing in our clubs newsletter. If you are interested in providing this service to our club, please contact Rick Wells K8SCI at 779-8999.

NORTH COAST ARC FIELD DAY COORDINATOR POSITION OPEN FOR 1987

If you would like to organize next years North Coast ARC Field Day, please contact Rick K8SCI at 779-8999.

NORTH COAST ARC NOVICE AND UPGRADE CLASS DEVELOPMENT

If you would like to assist, participate, or coordinate amateur radio code and/or theory classes, please contact Glenn Christman WD8OMW at 661-3656, or Rick Wells K8SCI at 779-8999.

SUPPLIES NEEDED (IN THE PREPARATION OF THE NORTH COAST COMMUNICATOR)

If you would like to donate to the North Coast Amateur Radio Club a Heavy Duty Electric Stapler that uses Standard staples, please contact Rick Wells K8SCI at 779-8999. Other items that are used often in the preparation of the clubs newsletter is 8 1/2 X 11 single ply fan-fold plain white paper as well as Black Multi-Strike Carbon Film Ribbon Cartridges (Printer Ribbons) (Radio Shack Cat. No. 26-1419). Any amounts of these would be greatly appreciated and would help save some of the monies spent on preparing the clubs newsletter.

CLEVELAND HAMFEST BANQUET AND CLEVELAND HAMFEST & COMPUTER SHOW

An updated flyer has been included with this issue of the North Coast Communicator. Please note the substantial reduction in the cost of attending the Cleveland Hamfest Awards Banquet (\$12.50 per person vs. \$19.00 per person last year).

One of the main purposes of the Banquet is to honor individuals from various local amateur radio clubs in the Cleveland area who have been chosen by their club to receive an award by the Cleveland Hamfest Association.

The Master of Ceremonies will be Ted Alexander of WRMR 850 AM and the Guest Speaker is Dick Feagler of WKYC TV-3.

I strongly recommend attending this years banquet (Saturday September 20) and hope to see you at the Cleveland Hamfest & Computer Show (Sunday September 21). Advance Hamfest tickets are available thru the North Coast Amateur Radio Club.

FCC Proposes Fees, Amateurs Exempted

In its consolidated Omnibus Budget Reconciliation Act of 1985, Congress amended the Communications Act of 1934 by adding a new Section 8 prescribing fees by the FCC. The Commission has begun to comply with the Act by adopting, on June 25, a Notice of Proposed Rulemaking, General Docket 86-285. Fees would range from \$20 for certain renewals through \$2,250 for a TV station construction permit, \$6,000 for a hearing on a TV license, and \$18,000 for some space station applications. Comments are due August 15 and reply comments September 2, 1986.

The news release contained a listing of certain services which would be exempt from the fees. None of the personal radio services were mentioned at that point, leading to speculation in parts of the amateur press there might be fees for amateurs.

Not so! Footnote 81 on page 26 of the 95-page document reads: "81. We note that section 8 (d) (1) of the Communications Act, and the Conference Report language, by no means includes all of the services exempt from fees. This explicit statutory language was necessary to services that would otherwise be subject to charges. By its failure to establish a specific fee, the statutory schedule of charges exempts whole categories of radio services, such as ... Amateur Radio."

In the past, fees have ranged from \$4-9 to renew an amateur license to \$25 for special call signs.

300 Amateurs Provide Communications

On July 8, a train carrying chemicals derailed and burned near Miamisburg, Ohio in the suburbs on Dayton. The chemical clouds from the fire eventually caused the evacuation of an estimated 35,000 people.

The Mound ARC, W8DYY, together with the local ARES, had previously devised a disaster plan for such an emergency and immediately put it into effect.

Police and fire units from other localities responding to the disaster were unable to communicate with the main command post. The National Weather Service needed weather reports every 15 minutes in order to predict what directions the chemical-laden clouds would drift. Hospitals, and state and local officials also needed communications. Eventually, over 300 radio amateurs from as far away as Cincinnati provided primary communications for these groups. An amateur was placed in every police car and fire truck, and several stations were up at the central command post. Amateurs accompanied various local officials, as well as the Governor when he toured the disaster site. The Mound ARC repeater was in continuous operation for 99 hours. Amateurs were highly praised for their organization and discipline. More details will appear in October QST.

AMSAT Phase 3C launch delayed

The launch failure of a European Space Agency Ariane-2 rocket May 30 will delay the launch of AMSAT's Phase 3C until 1987.

A third stage failure is being blamed for the fourth Ariane failure in 18 launches. Arianespace immediately suspended all plans for future launches pending investigation of the failure.

AMSAT is manifested to fly on the first Ariane-4 launch. This launch had been scheduled for early November. Arianespace officials said it would now be at least 2 months and up to 6 months or more before launches could resume.

Satellite Software Package

A brand new software package is now available for the Commodore 64. The exciting new features in Supertrak 64 include a highly detailed map display, ground track path, tracking up to 8 of 14 satellites in the menu and autocall of the QUICKTRAK tabular program. Bob McGwier, N4HY, the designer of Supertrak 64, says that some special software hooks are built into the package so it will run the soon-to-be available autotracking system from Encomm. The Supertrak package is now available at the AMSAT Software Exchange, P.O. Box 27, Washington, DC 20044.

Satellite News

The launch of RS-9 and RS-10 is now put in the September time frame. RS-10 is complete and was on display in Moscow recently. The launch of ISKRA-4 has also been postponed due to the end of the school year. ISKRA-4 is being built by students at the Moscow Aviation Institute. The students are now on summer break.

Effective May 29th, RS-5 and 7 are on a new schedule. RS-5 will be turned on from 0500 to 1000 UTC daily except Wednesday. RS-7 will be turned on daily from 1000 to 1700 UTC except Wednesday. These schedules presume access by the command station in the Moscow area. The schedules will be effective until August according to UA3CR.

Interference Threat to Weather Satellite Receivers

The National Oceanic and Atmospheric Administration (NOAA) operates weather satellites which produce data used in the study of the earth, its weather and resources. Among these satellites are those in the TIROS-N series, whose data are sent down to earth by radio on frequencies in the 1700-1710 MHz band. This band is currently used only by these satellites, and by other systems which do not interfere with the satellite receivers.

An unknown number of receiving ground stations for these signals have been built by weather forecasters, TV broadcast operators, universities, and private individuals. FCC regulations don't require licensing or registration of these receivers, so their existence and locations may be unknown to NOAA. Because they are unknown, NOAA can take no steps to protect them from interference. So far, this has not caused a problem.

Now, however, the situation may be changing rapidly. The FCC is considering a proposal to allow an entirely new type of radio device in the band, which has the potential for causing several interference to weather satellite receivers. These receivers can be protected only if they are identified. NOAA is appealing to anyone who knows of such a receiver, or who may be aware of plans to build one, to notify it. NOAA will provide additional information on how operators of such receivers can protect themselves from potential interference from these new devices.

There is no charge for this information, according to NOAA, nor will anyone be obligating themselves in any way by asking for it. NOAA wishes to register such stations in a government master file, to help prevent interference from occurring. Whether operators register their receivers or not, they are free to continue listening to NOAA's weather satellites. If they don't register, however, they may someday be unable to monitor them through the interference.

For information, contact Richard Barth at (202) 377-0635 in Washington, DC or write to: Office of Radio Frequency Management, US Department of Commerce, Room 6106 Main Commerce Building, Washington, DC 20230

EPA Proposes RF Exposure Limits

The Environmental Protection Agency has proposed to limit public exposure to RF radiation from communications. The Agency noted that presently there are no federal standards limiting public exposure to RF radiation, and biological effects have been observed in laboratory animals exposed to RF radiation in experiments.

The EPA proposes four alternatives for controlling public exposure to radio frequency energy. What will eventually emerge from the process will be guidelines for the other federal agencies. The Federal Communications Commission, at its discretion, may apply the guidelines to its licensees.

Two of the EPA alternatives are much stricter than the ANSI standard C.95.1-1982 (which sets limits of energy at 100 milliwatts per square centimeter at 0.3 to 3 MHz, dropping to 1 milliwatt per square centimeter at 30-300 MHz, then rising slightly to 5 milliwatts per square centimeter at frequencies above 15 GHz). The EPA makes the matter more confusing for laymen by using different references. It talks of whole-body average specific absorption rates or SARs, expressed in watt per kilogram of body mass (W/Kg) for frequencies above 3 MHz! For frequencies below that, a different kind of standard is used, placing separate limits on the electric field and magnetic field intensities. The tightest guideline would have an SAR of 0.04 W/Kg above 3 MHz, with the electric field intensity at 87 volts per meter (V/m) and magnetic field intensity at 0.23 amperes per meter (A/m). This guideline is said to be similar to that imposed in Portland, Oregon. It would cost the broadcast about \$34,000,000 to comply with this guideline, the EPA says.

The next level would have SARs of 0.08 W/Kg, electric field of 275 V/m and magnetic field of 0.73 A/m. The cost to the industry would be \$22,700,000. The third level would have SARs of 0.4 W/Kg, electric field of 614 V/m and magnetic field of 1.63 A/m. Broadcasters compliance costs would drop to \$12,400,000. This level is said to be equivalent to the ANSI standard.

The fourth option is nonregulatory: public awareness programs to distribute information on health effects and environmental measurements, and providing technical assistance to states and federal agencies.

Since the actual proposal was not available at press time, it's unknown whether the proposal will effect radio amateurs or even what the Docket number is for filing comments. The ARRL will lean heavily on its volunteer panel of experts, the Committee on the Biological Effects of RF Energy, for advice on what our position should be. Stay tuned for further information.

Vacationing in Mexico This Summer?

The telecommunications authorities of Mexico have recently made it easier for US amateurs, including Novices and Technicians, to operate in their jurisdiction, since there is no reciprocal licensing/operating agreement between the two countries. Full information for operating in Mexico is available from HQ for a business-size SASE.

Amateur Radio Boy Scout Merit Badge Pamphlet

The Boy Scout Amateur Radio Merit Badge Pamphlet has been rewritten by Mike Brown, WB2JWD. The new edition replaces one that was written by HQ staff member Perry Williams, W1UED, nearly 25 years ago! The Boy Scouts of America national headquarters reports that the pamphlet should be available in September.

Canadian and US Reciprocal Operating

A few years ago, the FCC, and the Canadian counterpart, the Department of Communications (DOC) agreed to automatic reciprocity. Thus, Canadian radio amateurs visiting the US and United States amateurs visiting Canada no longer need reciprocal operating permits from the country they are visiting.

Visiting amateurs must confine themselves to both the host country's restrictions and their home restrictions. When you travel across the US/Canadian border, it's always a good idea to have your original license with you.

CB Violence

An 11-meter CB transceiver in La Habra, CA, has been shot to death by an armed intruder. According to the Orange County Register, Dennis Carrico was talking on his CB set after midnight when he sensed that he was no longer alone. Carrico turned and saw a stranger with a gun standing over him. The gunman ordered him to turn off the CB and move away from it. Carrico obeyed, after which the visitor shot it three times and quietly left. Carrico was not harmed, but his \$500 transceiver was destroyed. Police theorize that the attack was in retaliation for TVL. The gunman was described as a white male, 45 years old, blonde hair, 5' 8" tall and weighing about 155 pounds. Anyone with information on the identify of the CB assassin is asked to contact Captain Herb Johnson of the La Habra Police Department. Tnx K00V and Westlink.

JAS-1 Handbook

The JAS-1 Satellite Handbook is now available from Project OSCAR. Originally available only in Japanese from JAMSAT, the English language edition is an exact translation. Packet enthusiasts and others will find much of interest withing the pages of this handbook.

It is priced at \$10 from JAS-1 Satellite Handbook, Project OSCAR, Inc., PO Box 1136, Los Altos, CA 94023-1136. Tnx WB6GFJ.

HR ARRL BULLETIN NR 49 fm ARRL Headquarters, Newington CT - AUGUST 8, 1986
via K3MC, Edited by K1BC via BARF80-BBS - To all radio amateurs BT

The launch of JAS-1 is now set for 2031 UTC August 12. After the second stage is once cut off, it has to reignite to obtain circular orbit. If it fails to do so, an elliptical orbit will result. Keplerian data for both cases follows:

NOMINAL ORBIT/ELLIPTIC ORBIT	
EPOCH 1986/08/12	21H33M05S/21H33M13S
SEMI-MAJOR AXIS	7871.740000/7283.107000
ECCENTRICITY	0.001260921/0.08197772
INCLINATION	49.971230/48.4860200
RA OF ASCENDING NODE	249.567/252.011
ARGUMENT OF PERIGEE	144.959000/127.237400
MEAN ANOMALY	187.270300/206.895700 AR

HR ARRL BULLETIN NR 47 fm ARRL headquarters Newington CT, July 22, 1986
Relayed by KB8NW/OBS - To all radio amateurs BT

As a result of improving sun angle, AMSAT has revised the oscar 10 operating schedule. Mode B will now be available from mean anomaly of 75 to 119, mode L from 120 to 136, mode B from 137 to 180, and the transponders will be off from 181 to 74. AR

Double Trouble

FCC has assessed monetary forfeitures against a father and son, Albert and Eugene Kuklin, of Tucson, Arizona. Albert was fined \$750 for operating an unlicensed station under a now-vacant call sign, K9LUX, through a repeater. Eugene, who is K7KCA, was fined \$300 for aiding and abetting the violation, transmission of a false call sign and communication with an unauthorized station.

New Jersey Man Found Guilty of Sending False Signals

Federal District Judge Garrett E. Brown, Jr., ordered Bruce Humenik of Maple Shade, New Jersey, confined to a Federal Prison Facility for a period of 90 days for psychiatric study. Mr. Humenik threatened to injure another person in violation of Title 18 USC Section 875 (c), which carries a maximum sentence of five years imprisonment and a \$250,000 fine. After the 90-day period, Mr. Humenik is to reappear before Judge Brown for sentencing. On April 21, 1985, Mr. Humenik was found guilty in Federal Court for transmitting a threat to injure a United States Coast Guard employee on a marine radio.

In May of 1984, Humenik broadcast false distress signals indicating to Coast Guard personnel and other agencies that he was on a vessel which was sinking or on fire. The broadcasts were on Channel 16, a radio frequency reserved by law solely for distress signals and other emergency broadcast.

In separate action, Wallace Anderson, also of Maple Shade, New Jersey, was fined \$1,000 by the FCC for operating on marine frequencies without a license. Anderson made unauthorized transmissions on marine channels 10 and 16, causing interference to marine operations and the US Coast Guard.

Owen Garriott, W5LFL, Resigns From Astronaut Corps

Owen Garriott, W5LFL, has resigned from the Astronaut Corps. W5LFL was the nation's most experienced current space traveler, having spent some 1650 hours in space. Garriott said he was leaving because the Shuttle has been grounded as a result of the January 28 Challenger accident and he expects a three to four year wait before he could fly in space again. Garriott spent 59 days aboard Skylab in 1973, and nine days in 1983 on the Shuttle's first Spacelab mission. On his shuttle mission, Garriott operated two-meter FM, working over 275 stations. Garriott is expected to become a private consultant.

New West Texas Section

The ARRL Executive Committee approved the creation of a new West Texas Section, comprising the western 40% of the state, effective January 1, 1987. The remaining sections are restyled North Texas and South Texas respectively. The area encompassed by the new West Texas Section presently includes 952 ARRL members.

Hi Everyone! Since I last wrote, a lot has happened. Mostly, I have taken the DOP SCANS and gone "underground" to help form a "secret" organization to counter malicious interference, and "fight for truth, justice, and the American way!"

Do you know what finally happened when the "King ate Delicious Turtle Soup? He turned into a Dedicated Turkey Scanner! Or, to put it another way:

"If your repeater is jammed,
and your club is undermanned;
WHO ya gonna call?

"If malicious interference
is ruining your coherence;
WHO ya gonna call?

"If you're trying
to run a Swap-n-Shop,
and all you're hearing
is buzz and pop,
WHO ya gonna call?

. . . "BOZO-BUSTERS!"

Attention Ham Cartoonists: we need your help to design a logo for the letterhead and T-shirt, —also to start working on the comic book! (We'll work on the screenplay later!)

Anyway, as you can see from the '82 Swap-n-Shop, and the Skywarn Net, we have done a pretty good job, not complete, but at least noteworthy. I am sure we have not found all the individuals responsible, and I am sure some of will surface again, but we have now assembled a group, methods, and equipment to deal with the problem more efficiently, and we are still gaining momentum.

When I last left you, I promised I would describe the technical details of the DOP SCAN circuitry. However, this is secondary to letting all in on what has been happening and describing our experiences in actually using the equipment. Unfortunately, I cannot go into too much detail, but I have been asked to give you a general overview.

I am sure everyone would like to thank the Hams who have been working on this, but we must continue to keep the number of participants and their indentities confidential for the time being.

Probably the most notable thing to come out of all this is the emergence of many concerned Hams from various clubs and spread-out locations who are working very effectively together.

We have developed a flexible, loose-knit philosophy which can be modified amazingly fast to change with the method-of-operation of the jammers. We have developed special communications on several bands and frequencies which are changed often and regularly. Through the creativity of various members we have come up with a way of knowing how to find each other on the air. If a jammer comes on, individual members of the operation who are available at that time can start tracking. Meanwhile, they initiate procedures to find out whether any other members are doing the same.

The key element in the way this is conducted is an implicit form of secrecy: At any given time, not even all the "BOZO-BUSTERS" know what the other members are doing, unless they are in a position to actually join in the search. Even when someone is caught and dealt with, the personalities in the group are such that we do not all "need to know" about it immediately, if at all.

The goal is to keep the trash off the air; keeping each individual apprised of all the details is extraneous and consumes too much time that could otherwise be used by the participants to keep themselves in a posture that makes them more available for actual hunting.

We have worked out a practical system where each participant can start out with the autonomy and flexibility of an individual, but call in the others when it is useful, then defer to a democratic decision-making mode as available members join in on a particular hunt.

I cannot go into specifics in print or on the air about how we operate, but our methods are starting to take effect. As a group, we have now caught six people in a 3-month period. Even now, I only know who one is for sure, because I one of several who zeroed-in on the location. It is not clear to me whether some of them were working together or whether all were working separately, —having been sort of drawn into the action by the excitement caused by the others' jamming. Now that is not to say that someone in our group doesn't have all that information. The point is that none of us needs to know that, nor does it need to be discussed on the air.

If you think you can get enough personal satisfaction working within these constraints, then we would be very happy to have you join us. Ironically, we are especially looking for people who have a flexible work schedule or who work unusual hours, more that people who have a lot of equipment.

Of course it helps if you have synthesized communications capability on 2 meters and other bands, as well as certain test equipment (beside DOP SCANS) which I cannot mention here. And obviously, it is useful if you have, or plan to get into building, some direction-finding equipment, including, but not limited to, DOP SCANS.

A good way to see if you would enjoy this activity is to join in on the Fox Hunts. For the time being, LEARA is continuing to encourage participation in those held by the North Coast Amateur Radio Club held on the second Saturday of each month at 7pm. The hunters meet behind the North Olmsted Branch of the Public Library on Butternut Ridge Road. Talk-in is on their 145.29(-) repeater. You do not have to be a member of any club to join in on the hunt. You do not even have to be a Ham or have any equipment. You can ride along with one of the hunters and observe.

When I last wrote, I mentioned that Frank, WD8AYH and I were going out on May 10th to try the first of three DOP SCANS I had completed. I was a valuable field test and proved the need for a few changes. The winner that night was Mike, K9SSL, who therefore became the Fox for June 14th.

On that next hunt, only two cars showed up. There was Rick, K8SCI, with his wife Pauline, KA8FOE, and the kids in one car using a Yagi, and myself with two visitors, in the other car using a DOP SCAN. It was neck-and-neck, and only by virtue of a slight traffic delay on Rick's part did I beat him by about 30 seconds!

The small turnout that night was not a total surprise considering all the other things

people can be doing, but it does emphasize why at this time it is better for LEARA to support NCARC rather than compete. It is a lot more fun when there are several participants.

Any way, that made me the Fox for July 12th! Let me tell you being the Fox is not easy. I had chosen to transmit for one minute on and one minute off, and had to bore everyone with my ramblings. It helps to have some sort of automatic keyer that you can program so that you don't have to manually key the rig and also don't have to have an open mike which may pick up revealing background sounds. The Fox transmits with equal on/off times anywhere from 15 -60 seconds, but must use the same time throughout the evening. There is a 2-hour limit. Since the hunters don't really talk on the air, the Fox has no way of knowing what is going on!

Apparently we had a good turnout that night, including Jerry, K8YUW, who had to cut out very early back to the NWS because of impending bad weather. Unfortunately no one told me that, so we had to learn the hard way and shut down about 8:15pm.

My 12-year-old daughter Amy and I had chosen a site near the Rocky River Reservation at the Stinchcomb Memorial. We had parked the car and made sure it had no "ham radio" indications on it, then carried all the gear up to a cutout in the rear of the Memorial. I used an ICOM-02/AT feeding a Mirage B-23 amplifier running off a car battery into a coffee-can vertical mounted on a photographic tripod. Of course, we also had our two lawn chairs, spare radios, and a stash of snacks for the "long haul".

So when it started raining, we had a lot of stuff to take back to the car. Another thing: the Fox is also one of the last people to make it back to Frankie's Pizza on Great Northern Blvd. where we all meet! The winners are well done eating by then.

Now, just to give you and any potential jammers who are reading this a rough example, consider that three separate hunters found me in the span of 35-40 minutes, all the way from the North Olmsted starting point, in Saturday night traffic, and only one used a DOP SCAN! So come on and join us!

But to get back to our discussion of the real "BOZO" hunting, I must emphasize that we cannot talk in specifics either here or on the air. Remember these people are listening to our QSOs. If we start talking about what techniques work or don't work, or details about how "we caught so and so last month", etc. we end up giving information and ideas to the troublemakers that makes them harder to catch!

For a while there was the philosophy that we should not even print the fact that we are organized or looking for these individuals. That was the position we took when we had not caught anyone. However, we now have a track record. We know we can do it, and it is now the consensus of those involved that revealing that fact may itself be a deterrent to those thinking of causing interference, because they didn't realize we could actually track them down.

In fact, one of the most effective techniques we used was having Tony, WD8IZU actually announce on the air at the beginning of the Swap-n-Shop. that if anyone heard any jamming, everyone should listen on the input frequency, then announce right over the same repeater which locations produced very strong readings. On the nights that announcement was made, there was no definitive jamming at all, which I might add, was a big letdown for the "BOZO-BUSTERS" waiting in the bushes.

At other times, when jamming occurs, pretend to IGNORE IT on the air, listen to the input, and notify us if it is near you.

HR ARRL BULLETIN NR 51 fm ARRL Headquarters Newington CT, August 12, 1986
Relayed by KB8NW/OBS - To all radio amateurs BT

The JAS 1 Satellite is now in orbit and is to be known as Japan OSCAR 12 or JO 12. The time of birth was 21 hours 47 minutes 07 seconds on August 12. JARL requests that amateurs do not, repeat DO NOT USE the transponder until further notice. AR

HR PROPAGATION FORECAST BULLETIN NR 32 fm ARRL Headquarters, Newington CT
Relayed by K3MC via BARF80-BBS, August 11, 1986 - To all radio amateurs BT

Since July 30 the solar flux curve has been almost a horizontal straight line, with a high of 71 and a low of 69. It has not been higher than 73 since May 29. This familiar pattern will be with us most of the time until cycle 22 takes over. When this will happen is anyone's guess at this point, but a clue will be flux readings consistently near 66 for a month or so at a time.

Visual observers with properly equipped telescopes will be seeing small and probably short lived sunspots and groups some 20 degrees or more above or below the solar equator fairly often, months before the end of cycle 21. Some have been reported in recent weeks, but not yet in numbers equal to those cited in the last year of the previous solar cycle.

Meanwhile, seasonal propagation variations will change the character of our prime DX bands more than with the small variations in solar activity expected for at least another year, regardless of when the new cycle actually begins. The changing sun angle of fall will make conditions more favorable for high latitude paths in the northern hemisphere, after early September, and mainly on the lower DX bands. There will be some rise in the maximum usable frequency for F layer DX, but not enough to improve the usefulness of the bands above 14 MHZ, compared to last year. Seasonal effects will be apparent in the propagation charts published monthly in QST.

We are seeing a generally quiet sun currently, with the solar flux running one to three points below figures for the previous solar rotation four months ago. A slight rise expected about August 15 will not affect propagation materially. The earth's magnetic field is expected to vary only slightly until late August. WWV K indices mostly below three will make for generally stable conditions until then. AR

HR ARRL BULLETIN NR 50 ARRL Headquarters, Newington CT August 8, 1986
Relayed by K3MC, Edited by K1BC via BARF80-BBS - To all radio amateurs BT

Acting in PR Docket 85-196, the FCC has amended part 97 to permit volunteer examiner coordinators to maintain question pools for amateur examinations, transferring the question pools to the VECs will result in the deletion of PR Bulletins 1035A, B, C and D, which contain the questions. Since the FCC is now specifying in the rules the scope of the written examination for each element, the topics for examination and the percentage of questions that should be selected for each topic for each element, PR Bulletin 1035, "study guide for FCC amateur radio license examinations", can be eliminated. VECs may continue to use the FCC question pools for the time being, but the FCC indicated that the VECs should be responsive to new developments in amateur radio and should update the question pools as needed.

This FCC action is a further step in the privatization of examination functions of the amateur radio service. The effective date of these rule amendments will be announced in a future FCC public notice, but the FCC suggests that VECs can begin to prepare question sets now.

This FCC action is contrary to the ARRL position. The League, in its formal comments, urged that the FCC continue to maintain question pools to ensure a single, standard, high quality pool of questions for each examination element.

Further details will appear in the ARRL Letter and QST. AR

"Captain Midnight" Video Pirate is an Amateur

John R. MacDougall, KA4WJA, of Ocala, Florida, pleaded guilty Tuesday, July 22nd, to one count of illegally transmitting the HBO interfering "Captain Midnight" signal before US Attorney Larry Gentile in US Court for the Central District of Florida at Jacksonville.

MacDougall, 25, a part-time satellite uplink operator for the Central Florida Teleport, also owns MacDougall Electronics - a company that sells backyard dish antennas. He used the commercial uplink facility to lodge his protest against HBO's decision to scramble its satellite-delivered programming. His April 27th jamming was apparently not his first.

HBO became the first to encrypt their signal on January 15, 1986. One-by-one satellite programmers have elected to follow suit and charge private satellite dish owners monthly fees.

HBO offered non-subscribers descramblers for \$12.95 a month. Most programming charges are higher than those charged by local cable companies. Even Congress, who scheduled hearings on the matter, is looking into the dispute.

While satellite scrambling has not set well with dish owners who have shelled out \$2,000 and more to receive what they thought was free satellite programming, it has proved catastrophic to private TVRO dealers. MacDougall Electronics was sustaining big losses. TVRO dealers have seen their sales dwindle to nearly nothing. Consumers, fearing what will happen next, simply aren't buying backyard dish systems.

Uplink satellite programming at the Central Florida Teleport ends at midnight. At 12:32 AM on April 27th, MacDougall, feeling the financial pinch, typed out a character generated message on his electronic typewriter and fed it up to the Hughes Galaxy I satellite along with a color-bar background.

The overwhelming "Captain Midnight" message greeted HBO and warned satellite programmers that "no way" would the public go along with marketing of satellite programming to backyard dish owners. During a 1940's vintage radio serial, Captain Midnight was a secretive pilot who battled evil.

The four and one half minute message was seen by millions of viewers who were watching the east coast HBO feed of "The Falcon and the Snowman" uplinked from Hauppauge, LI, New York. It was also seen by an FCC employee who happened to be taping the movie. While intentional satellite signal jamming had happened before, this instance literally sent federal and military officials into a panic!

We reached MacDougall Electronics by telephone. His business and home are at the same address. John was not in. We left word for him to return our telephone call collect. He did not.

FCC Agrees to Interview

We did speak, however, to Richard B. Engelman, the FCC's Chief of Inspections and Investigations Branch. He is in the Washington, DC Field Operations Bureau, the Commission's enforcement arm. An Extra Class amateur, he holds the unbelievable call sign of N4COP. It was his responsibility to coordinate the Commission's campaign to track down Captain Midnight. He was very candid with us.

"The very first thing we did was to gather information," he said. "We had early meetings with representatives from HBO, Hughes, Showtime and CNN. We also started gathering taped video recordings for analyzation. We got four of them."

"A profile was made of what we believed was used as far as uplink facilities to to cause the interference. One of the criteria was that we felt that it was at least a seven meter dish that was used to override HBO's signal (and)... felt that the most likely scenario was that it was a commercial uplink facility that was used after hours by an employee."

(Continued)

FCC Agrees to Interview (Continued)

"From there it took lots of time. We went through the Commission's licensee records to determine how many facilities had seven meter or larger dishes. There were between five and six hundred nationwide. While it was an east coast feed, we did not rule out the west coast. It could have been done from there."

"During the term of the investigation, we received at least fifty tips of various types. While a single phone call pointed towards the Ocala area, a number pointer towards Dallas. There were some suspicious circumstances there that at one time we were looking very closely at. The Ocala tip was from an accountant on vacation from Wisconsin traveling on the interstate. He overheard a rest area pay phone conversation about Captain Midnight. He called Washington with a license plate number and a brief description. At the time, that tip did not stand out more than the other forty-nine."

"Through analysis we were able to identify the specific make and model of generator used. Our field offices got in touch with and surveyed each uplink facility - particularly those that weren't broadcasting at the time - to determine what kind of equipment they had."

"It took us a while to go through that many (installations). Almost all of our field offices were involved with ones in their area. We whittled that down to about less than a dozen that had the right character generator and could have been used (were not transmitting at the time). One of that dozen was Ocala. When (FCC) engineers from Tampa visited Ocala there were several things that we noted."

"The operator on duty during the two incidents had been the same person. April 27th was the main incident, but it also had been reported that color bars had come up almost at the same time on the 20th - a week earlier. That wasn't reported to us until sometime after the 27th. The assumption was that whoever did it on the 27th was probably testing on the 20th."

"We conducted a lot of interviews and talked to a lot of people in the Ocala area. We eventually felt that we had a case that we could go before the grand jury with and get an indictment. In the meantime, Mr. MacDougall came forward and tried to work out some sort of plea bargain arrangement. It was a negotiated process. We felt that if he had not come forth, he would have been convicted anyway. We felt we had enough evidence."

"Because of the quickness of what finally transpired, the Private Radio Bureau, which has responsibility for his amateur license, was not involved in the negotiations. We will be making a recommendation to them that he receive one year suspended privileges on his license."

"As I understand it, the terms of the plea bargain are: one year probation, the nature of which is that if it is violated he will spend the remainder of the year in jail, and a \$5,000 fine ... plus the ham license suspension." MacDougall could have been fined \$10,000 and imprisoned for one year. "He was very interested in keeping his ham license."

"The fine is one of the largest ever levied against an individual. We have sent a message to anyone else that is thinking about doing this that we can catch the person and that the penalties are substantial. We might even want to go for a higher penalty next time since the individual would probably know about this incident making it even more arrogant ...willful."

When asked about possible civil penalties brought against MacDougall by HBO or Hughes, the satellite owner, Engelman said he knew nothing about that. "There has been no discussion... I am not a lawyer. I do not want to speculate."

(Continued)

FCC Agrees to Interview (Continued)

He did add, however, "There is no doubt in my mind that this is the biggest investigation that the FCC has ever undertaken in terms of man hours and importance... From the very start, our Bureau Chief made this top priority. The investigation took three months. It is not only a case of losing satellite data, the satellite itself could have been damaged. They are designed to operate with so much input power. More powerful overriding signals have the potential to be dangerous to the satellite itself."

"We now have in place a much better reporting mechanism so that we can get 'real time' information in the event of a reoccurrence. Plans have also been initiated with the various satellite programmers on what they will do if another disruption occurs. We have plans on how we will react. Next time we will be able to get more information quicker. There are techniques that I will not go into that are also being developed and implemented. We will be better prepared next time."

MacDougall has been released on \$5,000 bond for appearance before federal Judge Howard T. Snyder on August 26th for formal sentencing. The judge does not have to accept the plea bargain arrangement.

The incident made front page headlines in the July 23rd Ocala Star-Banner. The Ocala paper said that MacDougall had severely criticized scrambling by satellite programmers in an October 1985 interview with them calling it "unfair and ridiculous." Richard M. Smith, Field Operations Bureau Chief was quoted in the article as saying "The potential for damage to critical satellite frequencies cannot be underestimated." He noted that critical telephone calls, air traffic control, military data and medical information are all sent via satellite."

FCC Dishes Out Former UHF-TV Band

The FCC Commissioners tackled the 800-900 MHz spectrum allocation Thursday, July 24, after a similar meeting scheduled for two weeks ago was cancelled. That meeting was delayed by last minute changes on four proposals spelling out how the 800-900 MHz band would be divided up. Reportedly, FCC Commissioner James Quello wanted additional time to study the options.

Previously, UHF-TV channels 70-83, the band ultimately became the site of the most competitive and contentious FCC spectrum hand out in the history of US radio frequency allocation. Located in the so-called Land Mobile Reserve, it represents virgin spectrum ...the last band of frequencies that has never been used for anything (except a very few broadcast television translators that rebroadcast programming in remote locations).

Amid blood curdling screams from the TV broadcast community, the FCC reallocated TV channels 70-83 to form the Land Mobile Reserve in 1970. The proceeding was extremely difficult for the FCC - primarily because the broadcasters have such a powerful lobby. Even now, sixteen years later, the TV broadcast industry is still squawking about it. Incredibly valuable pieces of that former UHF-TV broadcast spectrum pie were dished out last Thursday for nothing!

When the FCC formed the Land Mobile Reserve, AT&T wanted 75 MHz for their newly developed (but not yet operating) cellular telephone service. They didn't get it. Instead the Commission came up with a system of apportioning 40 MHz of cellular spectrum among wireline and radio common carriers to preclude a telco monopoly.

(Continued)

FCC Dishes Out Former UHF-TV Band (Continued)

The 1979 WARC Region 2 ITU Table of Allocations specifies that the band 806-902 MHz be assigned only to the Land Mobile Service - that is to professional base-to-mobile or mobile-to-mobile radio users with at least one of the stations being capable of surface movement. Land Mobile also shares the 928 through 960 MHz spectrum with some other services. Cellular telephone interests operating on these bands wanted more expansion room. The 902-928 MHz band is, of course, assigned to the Amateur Radio Service and lies inside this quarrelsome part of the spectrum. It was not a part of last Thursday's hand out - other than to determine who our new spectrum neighbors would be. Strangely, even though the spectrum was allocated, we still don't know!

Not yet fully recognized by the amateur community, the 902-928 ham band is a very, very valuable amateur allocation indeed. Many industrial concerns would pay millions ..maybe billions, to have it! Some interfering ISM devices operate on 915 MHz - right in the middle of the ham band - which is probably why it was given to the hams in the first place.

It also became clear about 1979, that if the FCC was going to create a new Personal Radio Service, that it would have to be placed in the Land Mobile Reserve band. The Class E Citizens Band expansion proceeding had been terminated. When the FCC questioned the public on the need for a new Personal Radio Service, General Electric proposed PRCS, Personal Radio Communication Service.

PRCS was sort of a long-range high-tech cordless telephone service utilizing repeaters and trunking - automatic frequency channel assignment. The little known (but actually existing) 27-MHz "CB Reserve" - the area between 10 and 11 meters, was also considered by the FCC as a location for a new personal radio service. General Electric eventually retracted their PRCS proposal, so the Land Mobile Reserve spectrum proposed for it was never allocated.

Many companies, however, noting that the FCC was considering allocating portions of the Land Mobile Reserve, quickly rushed to get their frequency shopping list in. Dozens of requests poured into the FCC. Among them were appeals for TV studio link frequencies, airliner-to-ground and train radiotelephone systems, new consumer radio services, cellular interests, business radio spectrum - and the like.

About a year ago, the FCC decided who would not be getting spectrum from the Reserve. These included PRCS, 900-MHz cordless telephone and airfone (airliner-to-ground telephone - although it still operates on an experimental basis). Last Thursday, the FCC decided on who would be the latest to gain access to the Land Mobile Reserve.

Passed out were:

10 MHz additional - for cellular telephone - which brings the total allocation now to 50 MHz. Some think this is a gigantic mistake and a disservice to the public since cellular FM technology is no longer state-of-the-art. Most of the world is going to "digital" mobile telephone technology. Motorola and the cellular industry lobby were very successful in getting this additional huge chunk of spectrum.

10 MHz additional - Two way radio services. 2.5 MHz for Industrial Land Transportation. 2.5 MHz for the Business Radio Service. 5 MHz for the Specialized Mobile Radio (SMR) Service - a trunked radio service. In conjunction with this, we understand that the FCC will shortly propose that the commercial radio services may be used by non-commercial users. Under current FCC rules you can not use SMR or any other business radio system unless you are a business. Basically anybody will be able to gain access to the spectrum for their own communication needs.

(Continued)

FCC Dishes Out Former UHF-TV Band (Continued)

6 MHz for Public Safety Radio systems as part of a new nationwide trunked public safety radio plan. It will greatly improve public safety communications since it will allow a uniform networked US plan for police/fire/sheriff/emergency, etc. radio.

The most interesting allocation, however, is a 4 MHz frequency chunk to be held in reserve. A "Reserve" from the Reserve, if you will! It is not known what will happen there! We heard it rumored that perhaps a rural radiotelephone service will end up with this!

2 MHz (901-902 MHz right in front of the ham band) and 940-941 MHz for a new General Purpose Mobile Radio Service, GPMRS. The FCC does not know what it will ultimately be - nor who will use the frequencies! It is a proposed service without a purpose or users!

The FCC said they will not use a lottery to decide who will gain access. It is believed they want to auction off the frequencies to the highest bidder to get millions of dollars for the US Treasury to be used for such things as to support public broadcasting stations, for loans to minorities who want to get into telecommunications, or even to reduce the federal deficit, whatever. The law at present does not permit the FCC to sell spectrum.

The Commission also will not use "comparative hearings" such as used in broadcasting to determine who should get GPMRS spectrum. A possibility is that a "first-come-first-serve" selection process will determine who will get frequencies! We heard that the Commission expects to get hundreds of thousands of applications for GPMRS frequencies and they have no way to determine which request is the most worthy!

The Commission also gave away 27-MHz in the L-band between 1.5 to 1.7 GHz for a new Mobile Satellite Service, MSS, for communicating with land vehicles, ...planes, trains, automatic location positioning, etc., through satellites.

This was also viewed as a crushing defeat for the government of Canada (and our own NASA) who lobbied heavily for an MSS in the 800 MHz band. The FCC said we need those frequencies for Land Mobile and not Mobile Satellite stations. Furthermore, there is more room for multiple mobile satellites in the L-band. Two commissioners dissented on this decision. Canada will now not be able to have a mobile satellite service in the 800 MHz range due to interference from the United States.

Thus a total of 32 MHz was allocated from the Land Mobile Reserve - and additional 27 MHz from the 1.5-1.7 GHz L-band. It was one of the largest giveaways the US government has ever participated in - and it went largely unnoticed by the public and the media who failed to recognize its significance. (End)

UPCOMING HAMFEST & EVENTS

Sep 4 - NCARC Board Meeting, Thursday at 6:00 PM at Denny's, North Olmsted.
Sep 4 - NCARC General Meeting, Thursday at 7:30 PM, N. Olmsted Br. of Cuy. Co. Library.
Sep 6 - Findlay Hamfest, Sunday, Doors open at 8:00 AM, flyer enclosed.
Sep 6 - Ham-O-Rama and Computerfest 1986, Niagara Falls International Convention Center (Just North of Buffalo, New York). 7:00 AM to 5:00 PM. Talk-in 146.91 & 146.52.
Sep 13 - Twenty-Over-Nine ARC Hamfest, Youngstown, Ohio. 9:00 AM to 4:00 PM. Mahoning County Joint Vocational School, Mobile Chick-ins 147.315 & 145.270 rpters, or 146.52.
Sep 13 - NCARC Fox Hunt. Meet rear of N. Olmsted Br. Library. Hunt starts at 7:00 PM.
Sep 20 - Cleveland Hamfest Awards Banquet, Saturday at Holiday Inn, Middleburg Hts, Ohio.
Sep 21 - Cleveland Hamfest & Computer Show, Sun. at Cuyahoga Co. Fairgrounds, Berea, Oh
Sep 26 - NCARC Public Service, TRW Midwestern Invitational Hockey Tournament.
Sep 27 - NCARC Public Service, TRW Midwestern Invitational Hockey Tournament.
Sep 28 - NCARC Public Service, TRW Midwestern Invitational Hockey Tournament.
Oct 2 - NCARC Board Meeting, Thursday at 6:00 PM at Denny's, North Olmsted.
Oct 2 - NCARC General Meeting, Thursday at 7:30 PM, N. Olmsted Br. of Cuy. Co. Library.
Oct 4 - NCARC VE Exam, Maple Heights, Ohio at 1:00 PM.
Oct 11 - NCARC Fox Hunt. Meet rear of N. Olmsted Br. Library. Hunt starts at 7:00 PM.
Oct 18 - NCARC Public Service, Willow Run Horse Trials, Twinsburg, Ohio.
Oct 19 - NCARC Public Service, Willow Run Horse Trials, Twinsburg, Ohio.
Nov 6 - NCARC Board Meeting, Thursday at 6:00 PM at Denny's, North Olmsted.
Nov 6 - NCARC General Meeting, Thursday at 7:30 PM, N. Olmsted Br. of Cuy. Co. Library.
Nov 8 - NCARC Fox Hunt. Meet rear of N. Olmsted Br. Library. Hunt starts at 7:00 PM.
Nov 16 - Massillon AuctionFest '86, Sun at Massillon Knights of Columbus Hall, 147.18 Rpt.
Nov 23 - NCARC Public Service, Cleveland West 13.1 Mile Classic Road Race in Metropark.

MANY THANKS TO THOSE THAT HELPED WITH THE AUGUST 3rd PUBLIC SERVICE

Those that assisted with amateur radio communications at the Lakewood Youth Race Sunday morning August 3, 1986 were: N8ACT Fred, N8ETY Dave, N8GNJ Steve, K8SCI Rick, K9SSL Mike, NR8T Tim and KA8WRZ Larry.

NATIONAL TRAFFIC SYSTEM (NTS) AND A TWO-METER PACKET RADIO INTERFACE?

If you are active with a NTS Net and operate two-meter packet station, would you like to see both interfaced here in the Cleveland Area? If so, please consider becoming a station that would preform this function (or assist in it) and contact Tom Kryza KB8CI at 671-7199.

MANY THANKS TO THOSE THAT HELPED WITH THE AUGUST 9th PUBLIC SERVICE

Those that assisted with amateur radio communications at the America's Love Run in Lakewood to Benefit the Muscular Dystrophy Association (MDA) were: N8ACT Fred, N8CDC A1, N8FKT Bob, WB8NAQ Bill, K8SCI Rick, K9SSL Mike and NR8T Tim

CONGRATULATIONS TO THOSE MEMBERS WHO HAVE RECENTLY UPGRADED

Mike Walker K9SSL to Extra, Ed Milliron KA8ZRH to General, Paula Noaker KA8ZUB to Technician and Monica James KA8YYH to Technician.

AMATEUR RADIO CALL SIGNS as of AUGUST 1, 1986 - EIGHTH DISTRICT

Groups: A-Extra: NS8X B-Advanced: KE8GR C-General/Tech: N8HSC D-Novices: KB8ADW

DX - DX - DX - DX - DX - DX - DX - DX - DX

EXCERPTS FM ARRL HR DX BULLETINS #29 (7/18), #30 7/25) #31 (8/01) and #32 (8/08)

Relayed by KB8NW/OBS via BARF80-BBS and/or KV8M/OBS

Thanks to KA2VYW and the Western New York Dx Association, KB1BE and the Connecticut DX Association, K1XM and the Southern New England DX Association and the Yankee Clipper Contest Club, W9NUF and the Northern Illinois DX Association for the following DX information.

ALBANIA. European amateurs are reporting that the rumored ZA operation for September appears more and more likely to occur.

ANDORRA. C30CAX has been active daily from 0100 to 0300z on the lower 5 Khz of 40 meters. QSL to DL4VD.

BRUNEI. V85AC works CW occasionally between 1200 and 1400z between 14001 and 14010 Khz. On SSB, V85BA and V85HG frequent 14190 Khz between 1300 and 1430z.

CHINA. New stations active on CW and SSB are BY4CZ, QSL via Box 51, Suchow, and BY5RB QSL via Box 413, Zhenjiang.

FAROE ISLANDS. Jon, OY9JD, has been on 14222 Khz at 2300z. QSL to Box 2028, Torsmaven, 3800 Faroe Islands.

HEARD ISLAND. Jim, VK9NS, report that the Australian government is planning to make monthly trips to Heard Island beginning in January 1987. He hopes to go along with one of the early ships and to activate Heard Island.

HUNGARY. Numerous HG stations are now licensed to operate on 160 meters, with 10 watts between 1830 and 2000 Khz.

ITALIAN ROBOT/BEACON. Robot station IY4M is now operating on 28195 Khz with either 20 or 2 watts output to a ground plane antenna. To contact IY4M, listen for the beacon sending IY4M robot QRV QRV. Send your call twice, being careful not to leave any extra spaces between characters. If the robot hears you, it will ask for a signal report, then send you a report and a greeting in english or one of several other languages.

JAN MAYEN. A new radio operator is expected to be on Jan Mayen in August or September and he is expected to be active on the amateur bands.

MACQUARIE ISLAND. A VK0SJ operation occurs on 20 meters at 0300z on 14285 Khz. He prefers SSB but will make CW QSO's on request. QSL to WB6AFJ.

MARSHALL ISLANDS. Isao, JH1RNZ, will sign KX6ND for Majuro Island from August 20 to 26, on all bands, CW and SSB. QSL via JA1ELY.

MINAMI TORISHIMA. Rick, 7J1ACH, is very active. During the past week he has been worked on 14003 and 14206 Khz between 1200 and 1330z. He operates all bands, 160 meters through UHF, mostly CW but with a lot of SSB. He will be on the island for at least one year. QSL via NG7X. JD1BDK has been reported on 14030 Khz at 1100z.

NEW CALEDONIA. To commemorate the 25th anniversary of the amateur radio association of New Caledonia, members will be using the prefix FK25 from August 9 to December 31. The club station will be FK25A.

NORTHERN COOK ISLANDS. ZK1XV reports that he hopes to operate from Penrhynn Atoll in the Northern Cook Islands during the coming fall.

OMAN. A4XOS will operate SSB, CW, RTTY and AMTOR on 10 through 40 meters from 0400z August 20 to 1700z August 31 from the 17th Arabic Scouts Camp.

WAKE ISLAND. NH6FU/KHO, Bob, is very active on both CW and SSB. On CW he is on 14075 to 14100 Khz starting around 0600z. Look for him on SSB around 14309 Khz between 0230 and 0400z.

YEMEN. The rumor of a 4W operation by A92BK for September is false. John lived in Yemen for two years but was unable to obtain a license, and has no plans to return. The station recently signing 4W1NN and giving OE9SLH as his QSL manager is a pirate.

Amateur Radio License

Examinations

When:	Sat, Oct 4 at 1:00 pm
Where:	Maple Heights, Ohio (Call for location)
Elements:	1A-4B (Novice-Extra)
Walk-ins:	Allowed
Talk-in:	145.29 (rpt or simplex)

Needed :

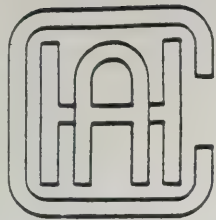
1. ORIGINAL FCC LICENSE, IF ANY
 2. ONE COPY OF YOUR FCC LICENSE, IF ANY
 3. ORIGINAL CERTIFICATE OF SUCCESSFUL COMPLETION OF EXAMINATION (CSCE), IF ANY
 4. ONE COPY OF CSCE, IF ANY
 5. ORIGINAL FCC COMMERCIAL RADIOTELEGRAPH LICENSE, IF ANY (FOR 20 WPM CODE CREDIT)
 6. ONE FORM OF IDENTIFICATION (DRIVERS LICENSE, BIRTH CERTIFICATE, PASSPORT OR A LIBRARY CARD)
 7. \$4.25 CHECK OR M.O. PAYABLE TO: ARRL/VEC
 8. FCC FORM 610
 9. PENCILS AND/OR PENS
-



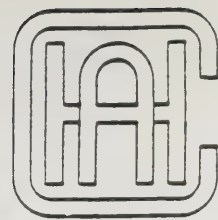
FOR MORE INFORMATION, CONTACT :

SHIRLEY LANTZ
7918 VESTA
NORTHFIELD CENTER, OHIO 44067
467-5745

RICK OR PAULINE WELLS
5955 BURNS ROAD
NORTH OLMSTED, OHIO 44070
779-8999



Cleveland Hamfest Association



Proudly presents the 1986

Cleveland Hamfest Awards Banquet

SATURDAY, SEPTEMBER 20, 1986 - Cash Bar at 6 PM, Dinner at 7 PM, \$12.50 per person.
Master of Ceremonies: Ted Alexander K8VPL of WRMR Radio 850. Guest Speaker: Dick Feagler of WKYC TV-3. Location: Holiday Inn (Airport South), Bagley and Engle Roads, Middleburg Heights, Ohio. One block West of the I-71 and Bagley Road Interchange. North from Ohio Turnpike, South from I-480. Reservations call: Pauline Wells KA8FOE at (216) 779-8999.

Cleveland Hamfest & Computer Show

SUNDAY, SEPTEMBER 21, 1986 - 8 AM to 4 PM - Cuyahoga County Fairgrounds, Berea, Ohio.

Mobile Check-in on 146.52 from 6 AM until 12 Noon, check-in number used for prizes.

- ** INSIDE VENDOR SPACE: \$10 first 8', \$8 for additional 8' (tables and chairs included)
Set up Sat. 12 noon til 4 PM, Sun. 6 AM (indoor security provided)
CONTACT: Dave Ernest, 4223 Columbia, N. Olmsted, OH 44070 PH (216) 777-3694
- ** OUTSIDE FLEA MARKET: \$4 each space. Opens at 6 AM. (Overnight parking available)
In case of rain, inside flea market space will be made available.
- ** GENERAL ADMISSION: \$4 donation at gate, \$3 in advance, children under 12 free.
- ** ADVANCE TICKETS: C.H.A., P.O. Box 93077, Cleveland, OH 44101 (until Aug 31), or through a participating local Cleveland area club.

** P R O G R A M S: DX 9:00 AM / OHIO AREA REPEATER COUNCIL 10:15 AM -
ARRL Forum 11:30 AM / ARES Forum 12:40 PM / PACKET RADIO 1:50 PM

** M A I N P R I Z E S: 1st IC-735 W/PS, 2nd IC-28A 2 Meter Mobile,
3rd BIRD MODEL 43 Wattmeter w/element, 4th 300/1200 BAUD MODEM.

** A R R L / V E A M A T E U R R A D I O E X A M S: (100% walk-in)
ALL CLASSES at 9:00 AM SHARP Location: Southwest General Hospital, on
Bagley Rd. just EAST of Hamfest. Cost is \$4.25 (ARRL/VEC). Bring
original & copy of lic., 610 & ID. SHUTTLE TO/FROM HAMFEST PROVIDED

** L A S T Y E A R T I C K E T D R A W I N G (must be present).

** N O N - H A M A C T I V I T I E S: Bingo, Door Prizes, Speaker on
exercise programs, craft making & home made chocolate demonstrations

** B U C K E Y E B E L L E S M E E T I N G: 12 Noon until 1 PM

INSIDE VENDOR INFORMATION: Dave Ernest, WD80YD at (216) 777-3694
Other information: Rick Wells, K8SCI, at (216) 779-8999



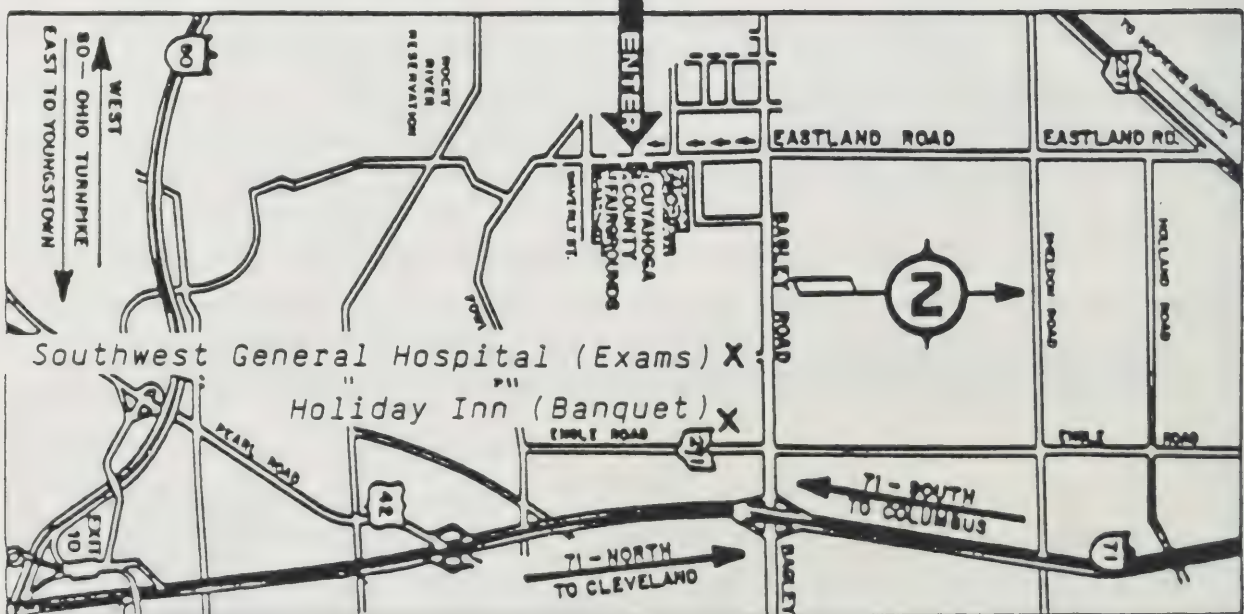
Cleveland Hamfest Association
P.O. Box 93077
Cleveland, Ohio 44101



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Cleveland Hamfest & Computer Show



Cleveland Hamfest

FINDLAY HAMFEST

Findlay Radio Club

Visit Our Bigger and Better Location at
THE HANCOCK COUNTY FAIR GROUNDS

Located on East Sandusky Street
Findlay, Ohio

Getting there is EASY!

Sunday, September 7, 1986
The Hancock County Fair Grounds

Doors Open at 8:00 A.M.

W8FT



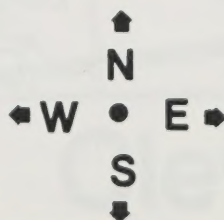
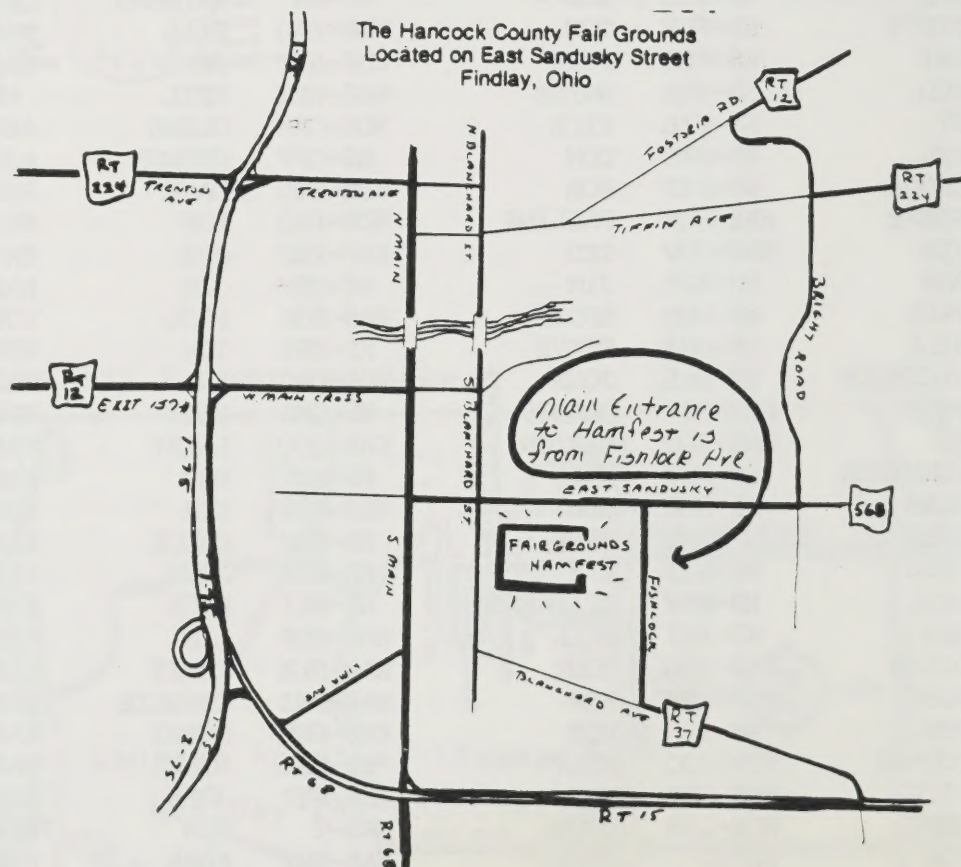
- Plenty of Parking
- Plenty of Room for Saturday Early Arrivals
- Central Location with a campus setting
- Better Food Areas
- Bigger Flea Market Area
- Flea Market Spaces: **\$4.00** each - No advanced sales
First-Come, First-Served basis only
- More Prime Space
- Choices of Buildings
- Limited RV Hookups Available - **\$5.00** Per Day
First-Come, First-Served basis only
- Family Oriented Setting
- Shaded Picnic Areas

Meetings & Forums

~~BUCKEYE BELLS~~
OSSBN
MAD RIVER RADIO CLUB
PACKET RADIO
(tentative schedule)

- For advance tickets, please return the form below
- For additional information, write us!
- Want to hold a meeting or forum at our Hamfest?
Write: Attn. Forums Chairman

FRC HAMFEST P.O. BOX 587 Findlay, Ohio 45839-0587



Follow the heavy black lines,
or all of the Hamfest Signs.

Talk In On 147.75/.15
and 449.15/4.15

**FINDLAY RADIO CLUB
W8FT**

North Coast A.R.C. Officers

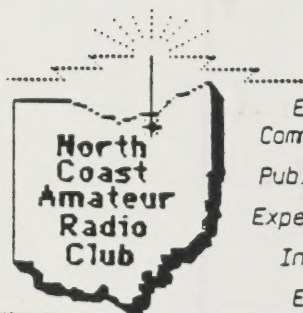
President - - -	Rick Wells	K8SCI	779-8999
V. President -	Bob Mills	K8TTZ	431-9492
Treasurer - - -	Glenn Christman	WD8OMW	661-3656
Secretary - - -	Steve Wolf	N08M	777-1177

North Coast A.R.C. Positions

Awards - - - - -	Fred	WB8UDA	U.L.
Contest - - - - -	Dave	KB8TT	942-5030
Editor - - - - -	Rick	K8SCI	779-8999
Education - - - -	Glenn	WD8OMW	661-3656
Field Day - - - -			
Finance - - - - -	Dave	N8ETY	459-0676
Membership - - - -	Pauline	KA8FOE	779-8999
NCARES - - - - -	Rick	K8SCI	779-8999
Net Coordinator -	Steve	N8GNJ 1-	365-2793
Programs - - - - -	Rick	K8SCI	779-8999
Public Relations -	Kathy	KA8ZUA	871-3055
Refreshments - - -	Pauline	KA8FOE	779-8999
Sunshine - - - - -	Tom	N8ETP	871-6181
Technical - - - - -	Jeff	KROJ	631-6087
VE Liaison - - - -	Shirley	KA8Y	467-5745

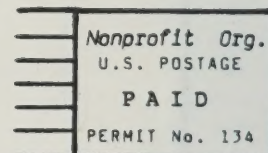
North Coast A.R.C. Trustees

Tom - - -	N8ETP	871-6181
Pauline -	KA8FOE	779-8999
Dick - - -	WD8ISB	467-7733
Mike - - -	K9SSL	225-1744
Tim - - -	NR8T	871-3055
Tom - - -	KV8M	238-6150
Ray - - -	WD8MHL	671-0317
Steve - - -	N8GNJ	365-2793



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